

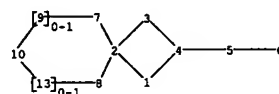
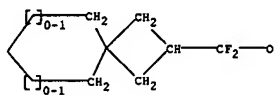
## WEST Search History

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DATE: Monday, December 18, 2006

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=ADJ</i>	
<input type="checkbox"/>	L4	de-10354550-\$.did.	2
		us-5445764-\$.did. or us-4853151-\$.did. or us-6146719-\$.did. or us-20030230737-\$.did. or us-	
<input type="checkbox"/>	L3	6716491-\$.did. or de-4303634-\$.did. or de-19755245-\$.did. or de-3717484-\$.did. or de-4408418-\$.did. or wo-200248073-\$.did. or jp-11080049-\$.did.	18
<input type="checkbox"/>	L1	20020030180	2

END OF SEARCH HISTORY



chain nodes :

5 6

ring nodes :

1 2 3 4 7 8 9 10 13

chain bonds :

4-5 5-6

ring bonds :

1-2 1-4 2-3 2-7 2-8 3-4 7-9 8-13 9-10 10-13

exact/norm bonds :

1-2 1-4 2-3 2-7 2-8 3-4 7-9 8-13 9-10 10-13

exact bonds :

4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:CLASS6:CLASS7:Atom 8:Atom 9:Atom 10:Atom 13:Atom

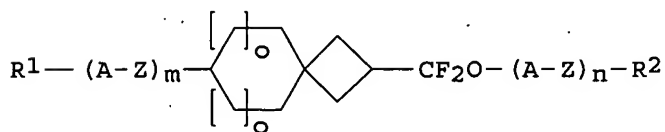
AN 2004:492274 CAPLUS  
 DN 141:44963  
 ED Entered STN: 18 Jun 2004  
 TI Cyclobutane derivative for liquid crystal mixture suitable for liquid crystal display  
 IN Taugerbeck, Andreas; Heckmeier, Michael; Kirsch, Peer; Luessem, Georg; Poetsch, Eike  
 PA Merck Patent GmbH, Germany  
 SO Ger. Offen., 45 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C07C043-225  
 ICS C07C043-192; C07D319-06; C07D309-06; C09K019-06; G02F001-137; G09F009-35  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 75  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10354550	A1	20040617	DE 2003-10354550	20031121
	CN 1720314	A	20060111	CN 2003-80104818	20031105
PRAI	DE 2002-10256172	IA	20021202		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 10354550	ICM	C07C043-225
	ICS	C07C043-192; C07D319-06; C07D309-06; C09K019-06; G02F001-137; G09F009-35
	IPCI	C07C0043-225 [ICM,7]; C07C0043-192 [ICS,7]; C07C0043-00 [ICS,7,C*]; C07D0319-06 [ICS,7]; C07D0319-00 [ICS,7,C*]; C07D0309-06 [ICS,7]; C07D0309-00 [ICS,7,C*]; C09K0019-06 [ICS,7]; G02F0001-137 [ICS,7]; G02F0001-13 [ICS,7,C*]; G09F0009-35 [ICS,7]
	IPCR	C09K0019-32 [I,C*]; C09K0019-32 [I,A]; C09K0019-34 [I,C*]; C09K0019-34 [I,A]
	ECLA	C09K019/32; C09K019/34A
CN 1720314	IPCI	C09K0019-32 [I,A]; C09K0019-34 [I,A]
	IPCR	C09K0019-32 [I,A]; C09K0019-32 [I,C]; C09K0019-34 [I,C*]; C09K0019-34 [I,A]
	ECLA	C09K019/32; C09K019/34A

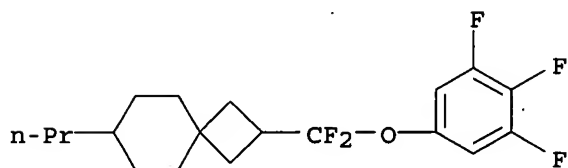
OS MARPAT 141:44963  
 GI



I

AB The invention relates to the new cyclobutane derivative represented by the formula I (R1, R2 = H, halo, C1-15-alkyl, alkoxy; A = trans-1,4-cyclohexylene, 1,4-phenylene, etc.; Z = -O-, -CH2O-, -OCH2-, etc.; m, n = 0, 1, 2; o = 0, 1) and its use as a component in liquid crystal mixture suitable for a liquid crystal display. The synthetic examples of the cyclobutane derivs. and 3 mixture examples are shown.  
 ST cyclobutane deriv synthesis liq crystal mixt display  
 IT Liquid crystal displays  
 (cyclobutane derivative for liquid crystal mixture suitable for liquid crystal

display)  
 IT Liquid crystals  
 (nematic; cyclobutane derivative for liquid crystal mixture suitable for  
 liquid crystal display)  
 IT 76802-59-0 76802-61-4 81711-13-9 83242-83-5 84816-56-8  
 85312-59-0 88038-92-0 89129-90-8 97398-80-6 102714-92-1  
 102714-93-2 102714-95-4 106349-49-9 121219-85-0 131819-23-3  
 132123-45-6 133261-31-1 133914-49-5 133914-50-8 133937-72-1  
 134412-17-2 135734-59-7 135734-60-0 137644-54-3 139215-80-8  
 175859-25-3 181943-55-5  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (mixture; liquid crystal mixture containing new cyclobutane derivative  
 suitable for liquid crystal display)  
 IT 704891-58-7P 704892-58-0P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of cyclobutane derivative for liquid crystal mixture suitable  
 for liquid crystal display)  
 IT 76-02-8, Trichloroacetylchloride 1493-13-6, Trifluoromethanesulfonic  
 acid 13411-42-2, 2-Trimethylsilyl-1,3-dithiane 99627-05-1,  
 3,4,5-Trifluorophenol 222292-44-6 276877-80-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of cyclobutane derivative for liquid crystal mixture suitable  
 for liquid crystal display)  
 IT 159295-08-6P 159295-09-7P 159295-11-1P 704891-55-4P 704891-56-5P  
 704891-57-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of cyclobutane derivative for liquid crystal mixture suitable  
 for liquid crystal display)  
 IT 704891-58-7P 704892-58-0P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of cyclobutane derivative for liquid crystal mixture suitable  
 for liquid crystal display)  
 RN 704891-58-7 CAPLUS  
 CN Spiro[3.5]nonane, 2-[difluoro(3,4,5-trifluorophenoxy)methyl]-7-propyl-  
 (9CI) (CA INDEX NAME)



RN 704892-58-0 CAPLUS  
 CN Spiro[3.3]heptane, 2-[difluoro(3,4,5-trifluorophenoxy)methyl]-6-(trans-4-propylcyclohexyl)- (9CI) (CA INDEX NAME)

